

ABSTRACT

An inverter has a semiconductor switch circuit provided in the primary circuit of a transformer. The switch circuit is controlled by a PWM circuit. The switch circuit is operated on the basis of an intermittent-operation signal having an ON state and OFF state to: set an error signal to a substantially zero level during OFF periods; gradually increase the error signal upon transition from an OFF state to an ON state; and gradually decrease the error signal upon transition from an ON state to an OFF state. Each ON phase of the intermittent operation is slowly started and slowly ended through charging and discharging of a capacitor provided in a feedback circuit. This enables concomitant application of constant-current control and intermittent-operation control to the inverter, which in turn provides a broad range of power that can be supplied to a load, significantly reduces humming of the transformer, and prevents over-current from occurring in the inverter.